Timing is Money

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In search of the role of timing in marketing decisions and effectiveness

Firms experience an increasing pressure to justify their marketing investments. This pressure is even more prominent during economic downturns when every euro matters more. I show that firms can increase the returns on their marketing investments by a good understanding of the timing of these investments, both at the macro-level of the effectiveness evolution across the business cycle, and at the micro-level of individual campaign decisions.

Marketing investments under pressure

One of the most fundamental changes the marketing profession has experienced over the past decade, is the gradual shift in the way firms look upon marketing expenditures. Once treated as mere costs, they are now considered more and more to be investments that should deliver shareholder value. Firms want to realize the highest possible returns on their investments, and marketing investments are no exception to this. It should hence not come as a surprise that a recent survey among senior marketing managers showed that exactly improvement of the performance and the accountability of the marketing organization are two of their main focuses (CMO Council, 2009). In addition, for the second time in a row, return on investment and accountability of marketing expenditures have been included in the Marketing Science Institute Research Priorities (Marketing Science Institute, 2008): *"…companies are more interested than ever in understanding and measuring the returns being obtained from marketing investments…"*, and better knowledge on more effective resource allocation is asked for (Marketing Science Institute, 2010). Measuring, understanding and improving the effectiveness of marketing investments has thus become of central interest to marketing practitioners as they experience more and more pressure to justify these investments.

One of the crucial determinants of the success of such investments, is their *timing* (see e.g. Bagozzi & Silk, 1983). Knowing and understanding its role in marketing decisions and in the effectiveness of marketing mix instruments are elementary prerequisites in developing effective strategies to maximize performance and returns. However, when referring to the timing of investments, it is important to distinguish between two clearly different but at the same time intertwined dimensions: the macro-level of the effectiveness evolution of investments across the business cycle, and the micro-level of individual campaign investment decisions.

Marketing mix effectiveness and business cycles

The recent economic crisis forced many managers to actively reconsider their marketing decisions (McKinsey, 2009). Marketing budgets are cut, and especially advertising budgets become scrutinized. By January 2009, 71% of all marketing managers had already reduced their advertising budgets, and 77% was planning to economize further on media expenditures (Advertising Age, 2009). This tendency to reduce marketing budgets during economic downturns has, in addition, been well documented in a growing stream of articles

on the intensity of marketing investments over the business cycles (e.g. Axarloglou, 2003; Lamey et al., 2007; Deleersnyder et al., 2009).

Whereas the evolution of the magnitude of the invested budgets over time is well documented, much less is known on whether, and to what extent, their effectiveness varies across the business cycle. During economic downturns, consumers' attitudes and expectations are altered. This, in turn, will have serious implications on their actual purchasing behavior, and the decision making process behind it (Katona, 1975). The uncertainty incorporated in such crises, especially concerning consumers' future revenues, makes the consumers lose trust. Encouraged by possibly reduced disposable incomes, consumers reduce or postpone their expenditures, and focus more on functional relative to hedonic features.

To answer the managerially relevant question which strategies are most useful during economic downturns, we investigated the effectiveness of two highly visible marketing mix instruments, i.e. Price and Advertising, over the business cycle. Proper knowledge on the effectiveness evolution not only enables firms to adjust their budgets according to the relative effectiveness of the different marketing mix instruments, but also enables them to avoid so-called double jeopardy situations. In such situations, firms economize on investments in certain instruments, without knowing that the effectiveness of those instruments has actually decreased, resulting in even lower effects than anticipated when decreasing the budgets. A good understanding of the effectiveness evolution, in contrast, gives indications on optimal budgeting strategies for advertising and pricing across the business cycle.

To provide answers to these questions, we analyzed the price and advertising effectiveness evolution of 163 CPG brands in 37 categories from the UK over 15 years of monthly observations. No private labels were included in our analyses, as they are likely to follow different marketing strategies than national brands. We first assessed the state of the economy by means of business cycle filtering and subsequently developed a time-varying sales response model, thereby correcting for endogeneity and allowing for heterogeneity and intra-category correlation of all error terms. Time-varying parameters were linked to the state of the economy by means of a parameter process function. Finally, Bayesian estimation techniques allowed for optimal statistical efficiency.

The results of our work show that during economic contractions, purchase patterns are less consistent than during expansions. In other words, consumer inertia is less during downturns than during upturns. Short-run and long-run price elasticities are stronger during contractions compared to expansions. During contractions, consumers experience an increased pressure on their budgets, and become more price-aware. They engage in more focused information search processes for lower price offers, thus trying to get the most out of their reduced budgets. Whereas the effectiveness of price discounts increases during contractions, both short-run and long-run advertising elasticities are smaller during contractions relative to expansions. Even though both advertising clutter and media rates can be expected to be smaller during contractions, lost trust and confidence among consumers, combined with reduced budgets, will decrease consumers' willingness to purchase, which, in turn, will lead to lower reactivity to advertising messages. The aforementioned effects, however, are not the same for all brands. Premium mass brands, characterized by high prices

and high advertising expenditures, show the lowest sensitivity of their marketing mix effectiveness to economic fluctuations. Value brands, with low prices and low advertising expenditures, in turn, show the highest sensitivity.

Given these effectiveness evolutions, reallocation of budgets from advertising to price discounts appears a sound strategy to maintain or even increase sales in the short run. However, managers should be aware of the fact that during contractions, consumer inertia will strongly decrease. As a consequence, long-run outcomes of price reductions will be considerably smaller than expected. At the same time, brands with higher advertising expenditures have a reduced sensitivity of marketing mix effectiveness to economic fluctuations. Advertising can be considered an investment in brand equity, which creates a buffer against the effect of unfavorable economic circumstances on consumers' purchases. As such, the findings presented here should not be interpreted as a call to drop advertising during downturns. Finally, economic downturns do not only have to be a threat, they can also be a challenge. Lower consumer inertia during such periods enables sampling of new brands and products, providing those firms that offer true added value to the customer better chances in gaining new customers, thus improving long-run performance.

Individual campaign decisions

However, the success of marketing investments will not only depend on the macro-dimension of their timing over the business cycle. A second dimension in which the effectiveness of marketing investments is time-dependent, is the micro-dimension of individual campaigns. Carry-over effects of advertising enable firms to apply dynamic advertising strategies, as the effects of current advertising investments will persist for some time in the future (e.g. Leone, 1995). Firms thus do not have to advertise every single week, but can capitalize on their investments during previous periods. Timing and magnitude of advertising investments, together, have been shown to be central drivers of advertising effectiveness (e.g. Danaher, Bonfrer & Dhar, 2008).

Firms are not acting in a void though. Their products are competing with other offerings for the attention of, and ultimately the purchase by, consumers. Competitive interference by means of competitive clutter can seriously hamper the firms' efforts in doing so (e.g. Assael, 1998). This competitive clutter is essentially a combination of (i) the number of competitors that is advertising, and (ii) the total amount of advertising by these firms. It was shown that especially the number of competing messages will play a crucial role in the reduction of the own advertising effectiveness (Danaher et al., 2008). Being able to understand when to expect competitors' advertising, in combination with the total expected magnitude of this advertising, therefore becomes crucial. It enables firms to avoid competitive interference, thereby increasing the effectiveness of the own investments.

To understand how firms make their advertising decisions over time, we investigated the drivers behind the timing and magnitude of the observed advertising spending patterns. We therefore analyzed the weekly advertising decisions of 748 CPG brands in 129 product categories from the UK over a period of three years, thus covering nearly completely the assortment of an average supermarket. Here as well, we did not include private labels because

of likely different marketing strategies, but included both large and small brands, frequent and extremely infrequent advertisers to obtain the most comprehensive view of the market.

The basis of our analyses, is the fact that advertising decisions can be seen as a multiple decision process. Two key decisions which have to be taken, are *when* to advertise, and *how much* to spend (e.g. Tellis, 2004 p. 72). We treated this dual advertising decision as an investment decision process. At each point in time, the brand chooses (i) whether or not to advertise (*timing*), and, (ii) conditional upon this decision, how much to spend (*magnitude*) (e.g. Bar-Ilan & Strange, 1999). These decisions, we argue, can be explained as the outcome of advertising goodwill (Adstock) management systems. Brands advertise to create goodwill (Adstock) among consumers, goodwill that is expected to ultimately translate into sales. As a consequence, this advertising goodwill should not drop below a certain minimum level s. If this would be the case, the brand will start advertising again, until a certain goal level S has been reached. Over time, goodwill will depreciate, leading in fine to a new advertising campaign. As such, this system shows strong resemblance with well-known (s,S) inventory management systems. Although such systems are very popular and widely used in logistics (e.g. Silver, Pyke & Peterson, 1998), applications in advertising research are scarce (Zufryden, 1973; Doganoglu & Klapper, 2006). This advertising goodwill management system was subsequently introduced in a new multivariate hierarchical tobit-II type model which was estimated by means of Bayesian estimation techniques (Gibbs sampling) to ensure optimal statistical efficiency.

Observed advertising spending patterns were shown to be mainly driven by internal firm factors, with category and competitive factors having a much smaller or no impact, respectively. As such, timing and magnitude of advertising can to a large extent be considered the outcome of brands' advertising goodwill strategies. Contrary to what has often been argued in the advertising literature, advertising decisions appear not to be influenced by competitive reasoning. A higher likelihood of competitive advertising will not lead to an increased likelihood of a new advertising action, or to higher expenditures. Escalation tendencies, with brands reacting on each others actions in an ever more fierce competition (e.g. Metwally, 1978) could consequently not be found. These results, on the other hand, complement the findings by Steenkamp et al. (2005) as their work also showed that reactions to competitive advertising shocks are extremely rare. Anecdotal evidence from practitioners adds to these findings, as several advertising agency account managers confirmed that brands, in general, focus on their own internal advertising utility calculi, and much less on what their competitors are doing in their actual advertising decisions.

Decision processes on timing and magnitude of advertising campaigns, on the other hand, are not equal for all types of brands. Brand market share and advertising frequency are important determinants of the extent to which brands' advertising decisions can be described by means of advertising goodwill management systems. Larger brands can react better to changes in their advertising goodwill as they simply have more means at their disposal (Allenby & Hanssens, 2005). Learning effects through previous experience, in turn, may have shown higher frequency advertisers ways to monitor more closely the evolution of their advertising goodwill.

Our framework now provides a useful tool for firms to analyze and predict competitors' advertising spending patterns. It allows them to understand when advertising by competitors is more likely to take place, and to subsequently avoid advertising at the same time. As such, understanding and taking into account the timing of competitors' actions enables firms to avoid competitive clutter and increase own advertising effectiveness.

Timing is Money

In my doctoral work, I argued that firms can benefit from a good understanding of the timing of their marketing investments at two distinct but closely related dimensions. A first dimension is the macro-dimension, which is related to the timing of investments across years, over the business cycle. A second dimension is the micro-dimension, with the timing of individual actions at the weekly level. I showed that firms can improve the effectiveness of their marketing investments by a better allocation of their budgets over price and advertising efforts based on the state of the business cycle. In addition, they can better manage their advertising goodwill stock by carefully timing their advertising expenditures. As such, my work shows that good timing is money.